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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,212	07/07/2006	Wilfried Erb	25045-17	6896
7590 John B. Hardaway Nexsen Pruet P.O. Box Greenville, SC 29603			EXAMINER INYARD, APRIL C	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 04/07/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/575,212

Applicant(s)

ERB ET AL.

Examiner

APRIL C. INYARD

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-26 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/10/2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/US)
Paper No(s)/Mail Date 04/10/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority to DE 10347080.8 filed on 10/10/2003 under 35 U.S.C. 119(a)-(d). Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Examiner's Notes

2. **An official Notice of Non-Compliant Amendment (37 CFR 1.121) was issued to Applicant on 10/28/2008.** It is made of record that Applicant has not filed a response. Any preliminary amendment, regardless of when it is filed, must comply with 37 CFR 1.121, e.g., the preliminary amendment must include a complete listing of all of the claims and each section of the amendment must begin on a separate sheet of paper. *See MPEP § 714*. If a preliminary amendment filed after the filing date of the application fails to comply with 37 CFR 1.121, applicant will be notified by way of a Notice of Non-Compliant Amendment and given a non-extendable period of one month to bring the amendment into compliance with 37 CFR 1.121. If the applicant takes no corrective action, examination of the application will commence without consideration of the proposed changes in the non-compliant preliminary amendment.

Therefore in accordance with MPEP 714.01(e), the non-compliant amendment filed on 04/10/2006 with cancelled claims 1-24 and pending claims 25-46 has not been considered, and the originally filed claims 1-26 have been examined.

Drawings

3. The drawings are objected to because Figures 1-2 and 16-17 appear to be photographs or images reproduced from a microscope and contain faded or overexposed regions that are blurred or difficult to see, and further the text of Fig. 16 is illegible. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. **Claims 4-26** are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only (Claim 5) and/or

cannot depend from any other multiple dependent claim (Claims 4 and 6-26). See MPEP § 608.01(n).

Accordingly, the **Claims 4-26** have not been further treated on the merits.

Claim Interpretation

5. The Examiner notes the recitation in Claim 1 that composition components (b) and (d) are “optional”, and have not been considered as essential elements to the claimed material composition. Given that components (b) and (d) are not essential but are optional, the Examiner takes the position that any teaching of a material suitable for use as a gasket sealing material that has components (a) and (c), where Applicant fails to specifically point out the composition of (c) is considered to read on Claim 1.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 1-3** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites that components (b) and (d) are “optional”. However, Applicant further includes physical property limitations to the flat material of Claim 1 such as fiber web thickness and thermal stability. Claims 2-3 further limit the physical properties of the flat material of Claim 1, but as components (b) and (d) will clearly contribute to such physical parameters, it is

unclear what the composition of the flat sealing material actually is that yields such physical properties as claimed in dependent Claims 2-3. Given that components (b) and (d) are not essential but are optional, the Examiner takes the position that any teaching of a material suitable for use as a gasket sealing material that has components (a) and (c), where Applicant fails to specifically point out the composition of (c) is considered to read on Claim 1. Additionally, Claims 2-3 are rejected due to their dependency from Claim 1.

Further, Claim 3 recites the limitation "fibre mats". There is insufficient antecedent basis for this limitation in the claim as Claim 3 is dependent on Claims 1 or 2, and Claim 1 only provides support for a "fibre web".

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Stecher et al. (US Patent No. 7,144,622 as an English translation for WO/2001/16240, published March 8, 2001).**

Stecher teaches a sealing coating for a gasket that combines a good capacity to adapt to the mating surface to be sealed with long-term sliding properties which can endure high surface pressures and temperatures (*Col 1, lines 46-51*). The sealing material is made of thermoplastics including polyphenylene sulfide (PPS), polyetherketone (PEK), and polyether ether ketone (PEEK) due to their superior resistance to oil, grease, and hydrolysis at elevated temperatures (*Col 3, lines 48-57*). Reinforcing or filling agents such as graphite, carbon, carbon fibers, or glass fibers are added to the thermoplastic (*Col 3, lines 3-10*). Additionally, a fluorine-containing polymer such as polytetrafluoroethylene (PTFE), perfluoroalkoxy copolymer (PFA), mixtures thereof are added to the coating material composition to control the hardness of the material (*Col 2, lines 54-62; Col 3, lines 58-63*). In working example 1, Stecher discloses a multi-layered sealing material having ten individual layers made of a mixture of PEEK, reinforcing graphite, a mixture of fluorinated thermoplastic materials PTFE and PFA, where the overall layer thickness of 60 micrometers (*Col 5, lines 14-67*):

Material 1	PEEK	PEEK	
Material 2	PTFE	PTFE	
Material 3	PFA	PFA	
Material 4	PFA	PFA	
Material 5	PFA	PFA	
Material 6	PFA	PFA	
Material 7	PFA	PFA	
Material 8	PFA	PFA	
Material 9	PFA	PFA	
Material 10	PFA	PFA	
Material 11	PFA	PFA	
Material 12	PFA	PFA	
Material 13	PFA	PFA	
Material 14	PFA	PFA	
Material 15	PFA	PFA	
Material 16	PFA	PFA	
Material 17	PFA	PFA	
Material 18	PFA	PFA	
Material 19	PFA	PFA	
Material 20	PFA	PFA	

The Examiner considers the PEEK to correspond to thermoplastic component (a), the graphite to reinforcing fiber component (b), and the mixture of PTFE and PFA are considered to correspond to the binders and other compounding materials (c) and (d), where each of these components are present in the sealing material taught by Stecher in a weight percentage range that is encompassed by Applicant's presently claimed ranges. The overall layer thickness of 60 micrometers as taught by Stecher reads on Applicant's claimed range of 0.01-3.0 mm.

Stecher teaches that the sealing material has a dimensional stability under heat measured in accordance with ASTM D648 at 1.8 N/mm² of at least 140°C and preferably at least 190°C (*Col 3, lines 20-24*). Stecher further teaches that the sealing material is thermally stable long-term usage temperatures of at least 200°C. Applicant claims thermal stability under application conditions up to 330°C.

The Examiner notes that Claim 1 recites the limitation: “producible by pressing...under pressure and at elevated temperatures to give a reinforced composite film”. However, “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process”, *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Further, “although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product”, *In re Marosi*, 710 F.2d 798, 802, 218, USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

Therefore, absent evidence of criticality regarding the presently claimed (process) and given that Stecher meets the requirements of the claimed composition, Stecher clearly meets the requirements of present claims particularly given the dimensional stability of the sealing material under heat and pressure.

In view of the above, Stecher therefore teaches the flat sealing material of **Claims 1-2**.

Regarding the limitations of **Claim 3**, toward the density of the fiber web or mat, as Stecher teaches a sealing composition made of a mixture of thermoplastic fibers, binder and fillers with a layer thickness and dimensional stability that reads on Claim 1, the Examiner takes the position that the density of such a sealing material would inherently be encompassed by the Applicant's claimed range.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. **Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosack et al. (US Patent No. 7,309,520 as an English translation for WO/2002/101267, published December 19, 2002).**

Kosack teaches a flat gasket material with a weight per unit area ranging from about 20-500 g/m² and a fabric web of fibers and fiber blends that include polyimide (PI), aramide, glass fibers and have a nonwoven layer thickness ranging from 1 to 2.5 mm (*Cols 1-2, lines 56-67 and 1-16*). The fiber web taught by Kosack is further impregnated with a fluorine-containing polymer, PTFE, at a temperature from about 30-300°C and that the low density of such gasket sealing materials is well suited for applications requiring high gasket deformation (*Col 3, lines 10-25*), but if gas tightness and stability of the flat gaskets is needed, the PTFE impregnated fiber

web may be subjected to a heat and compression treatment and further, several layers of the webs maybe laminated together (*Col 3, lines 26-50*).

Given that the flat gasket material taught by Kosack is made of materials that read on components (a)-(d) of Claim 1, has a total web thickness range of 1-2.5 mm that is encompassed by Applicant's claimed range of 0.01-3 mm of Claim 1, and has a density range of 20-500 g/m² that is encompassed by Applicant's claimed range of 8 to 400 g/m² of Claim 3, the Examiner takes the position that the flat gasket material taught by Kosack substantially meets the limitations of instant **Claims 1-3**.

13. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beyer et al. (US Patent No. 4,748,075).

Beyer teaches a cylinder head sealing gasket material made of fibers (5-40% by weight synthetic organic, 5-25% by weight natural organic, and 35-90% by weight mineral and/or metal), fillers (30-70% by weight), and organic binders (3-15% by weight) (*Col 2, lines 47-55; Claims 1-14*). Beyer specifically discloses working examples where the sealing material is made of a mixture of polyamides (polyaramid, 10-20%), reinforcing fibers (rock wool or cotton, 28-35%), 5-10% of a binder, and other fillers (*Examples 1-3, Cols 4-5*).

As discussed above, the Examiner interprets the limitation "producible by pressing" as a product-by-process limitation.

Therefore, as Beyer teaches a composition for a sealing gasket material that reads on the Applicant's claimed composition, the Examiner takes the position that the composition taught by Beyer is capable of being formed by pressing and would have the physical properties as claimed.

Further, regarding the limitation in Claim 1 that the total layer thickness ranges from 0.01 to 3 mm and the limitation in Claim 3 toward the density of the fiber web, Beyer teaches that the gasket material is soft and in their final state are plastically deformable or elastically cross-linked (*Col 2, lines 6-20*). Further, the fiber lengths used in the working examples taught by Beyer are no greater than 3 mm.

It would therefore, at the time the invention was made have been obvious to one having ordinary skill in the art given the teaching in Beyer that the gasket sealing material is desirably plastically deformable in its final state and that the components for the gasket sealing material may be present over a wide range to modify the gasket material mixture by adjusting the weight percentages of the thermoplastic fibers, reinforcing fibers, and fillers and the overall layer thickness to yield a gasket sealing material with the desired flexibility and durability, as these physical properties ultimately depend on the material components and thickness of the layer.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the gasket material components and layer thickness for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 39, 45-46, 49, and 53 of copending Application No. 10554456. Although the conflicting claims are not identical, they are not patentably distinct from each other because copending independent Claim 39 is toward a non-

woven mat as an intermediate product, where the non-woven made is made of 30-90% fibers, 10-70% reinforcing fibers, and 1-10% binder having a mat density between 8-400 g/m².

Copending dependent claims 45-46, and 49 further specify that the non-woven mat fibers are chosen from a Markush group that corresponds to component (a) of instant Claim 1, reinforcing fibers are chosen from a Markush group that corresponds to component (b) of instant Claim 1, and copending Claim 49 specifies additional additives, which corresponds to component (d) of instant Claim 1. Copending claim 53 recites that the mat has a thickness between 0.1-4 mm, which corresponds to and encompasses the thickness of instant claim 1 (0.1-3 mm).

Therefore, at the time the invention was made, it would have been obvious to one having ordinary skill in the art that the non-woven web taught by copending claims 39, 45-46, 49 and 53 has the same composition and properties of the flat sealing material of the instant claims 1-3, and would be thermally stable under high temperature applications.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to APRIL C. INYARD whose telephone number is (571) 270-1245. The examiner can normally be reached on Monday - Thursday 8:00 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner, Art Unit 1794

APRIL C INYARD /A. C. I./
Examiner, Art Unit 1794